

DROUGHT CONTINGENCY PLAN

(SWD Framework)

I. INTRODUCTION

1-01. Purpose of Document. The purpose of this Drought Contingency Plan (DCP) is to provide a basic reference for water management decisions and responses to water shortage in the *(name of basin(s))* induced by climatological droughts. As a water management document, it is limited to those drought concerns relating to water control management actions. Because of the long-term nature of a drought and the specific problems that may result, this document details only limited number of specific actions that can be carried out related to water control. Its primary value is in documenting data needed in decisions and defining the coordination needed to manage the district's water resources to ensure that they are used in a manner consistent with the needs which develop. This Drought Contingency Plan is Appendix *(No. of Appendix)* to *(Name of Basin)* Master Manual Dated _____. It covers *(list projects)* in the *(name of basin)* Basin.

II. AUTHORITIES

2-01. Authorities - Include from the following list those authorities that are pertinent to the preparation of drought contingency plans and actions directed therein.

a. PL 84-99. "Emergency Supplies for Clean Drinking Water" as amended by PL 95-91. This law provides the authority under which the Chief of Engineers may under certain statutory conditions construct wells and transport water to farmers, ranchers, and political subdivisions within areas determined to be drought distressed.

b. Section 216, Public Law 91-611, (84 Stat 1830), Rivers and Harbors Act of 1970. This act authorizes the Secretary of the Army to review the operation of existing Corps projects and recommend to Congress modification of their structure or operation to improve the environment.

c. Section 6, Flood Control Act of 1944, provides the authority for the Secretary of the Army to make contracts with states, municipalities, private concerns, or individuals at such prices and on such terms deemed reasonable for domestic and industrial uses for surface water that may be available at any reservoir under the control of the Department of the Army.

d. ER 405-1-12, "Real Estate Handbook," 20 November 1985. Provides guidance for issuing an appropriate real estate instrument for water withdrawal users who will be installing water lines or other facilities or equipment.

e. ER 500-1-1, "Emergency Employment of Army and Other Resources, Natural Disaster Procedures," 21 December 1983. This ER identifies the mission, authorities, responsibilities, and chain of command of the Corps in provision of disaster assistance. Specifically it establishes guidance in the application of PL 84-89 and PL 95-91 and sets reporting and assistance request procedures.

f. ER 1110-2-240, "Water Control Management", dated 8 October 1982. This regulation prescribes the policies and procedures to be followed in water management activities including special

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regulations to be conducted during droughts. It also sets the responsibility and approval authority in development of water control plans.

g. ER 1110-2-1941, "Drought Contingency Plans", dated 15 September 1981. This regulation provides policy and guidance for the preparation of drought contingency plans as part of the Corps of Engineer's over-all water management activities.

h. ETL 1110-2-251, "Preparation of Water Control Manuals", dated 14 March 1980. This document provides a guide for preparing water control manuals for individual water resource projects to include drought contingency plans.

i. EM 1110-2-3600, "Management of Water Control Systems", 30 November 1987. This regulation requires that the drought management plan be incorporated into the project water control manuals and master water control manuals. It also provides guidance in formulating strategies for project regulation during droughts.

j. Multiple memorandum, CECW-RP, 11 Jul 88, subject: Request for Withdrawal of Small Amounts of Water over Short Periods of Time. Drought and other emergencies affecting domestic, municipal, and industrial water supplies will likely generate requests for water stored in Corps reservoirs. This memo outlines an expedited process for dealing with such requests that can be included in drought contingency plans. District Commanders should take the initiative to make Section 6 assessments, Flood Control Act of 1944, of the availability of storage for limited withdrawals (up to 50 acre-feet of water may be allocated by the District Engineer in accordance with EC 1105-2-181). Agreements for small amounts of water withdrawals (50 acre-feet or less) may be accomplished at the District level for a term of no more than one year and a clause may be included for an automatic renewal.

k. Multiple letter, CESWD-ED-WR, dated 8 June 88, subject: Drought Contingency Plans. This letter directs the Districts within the Southwestern Division to initiate preparation of drought contingency plans for their basins and projects.

III. DROUGHT IDENTIFICATION

3-01. Historical - Describe historical drought(s) which have occurred in the basin.

3-02. Severity - Provide a general description of a severe drought and parameters that will effect actions to be taken. The Palmer Index should be used as one parameter for basin conditions and/or actions to be taken. The parameter for triggering actions at individual projects should be based on pool elevations. Note: Severity action levels should not be described here. However, a general discussion may be given with reference to Section VII (Drought Management Plan) for details.

IV. BASIN AND PROJECT DESCRIPTION

4-01. Basin Description - General characteristics of the basin water supply and use; a mass balance on basin supplies would be helpful. Description should include physical constraints, i.e., water supply and minimum channel flow, water transfers into and out of the basin, etc.

4-02. Project Description - Description along with other pertinent information should include physical constraints, i.e., water supply and power intakes, minimum hydropower requirements, boat ramps, etc.

V. WATER USES AND USERS

5-01. Current Project Water Uses and Users

- a. Uses - Describe current uses of project waters (stored water and releases) within the basin. Differentiate between authorized project purposes and uses.
- b. Users - List Users and their priority to use. Identify those that have downstream water rights.

5-02. Potential Project Water Uses and Users

- a. Uses - Describe potential project water use which might be used during a drought.
- b. Users - List potential Users and estimated water use.

5-03. Available Storage Surplus or Current Needs. Identify and quantify storage in excess of current uses.

VI. CONSTRAINTS

6-01. Constraints - Identify, in general, both legal and institutional constraints that could constrain potentially available water resources. These include interstate compacts, state laws, water rights, operating procedures by river authorities and other entities.

VII. DROUGHT MANAGEMENT PLAN

7-01. General

a. General Concept of the Plan. The Drought Management Plan presents a broad outline of actions necessary to effectively manage the District's water resources during time of shortage. The actions of the District will be broadly related to the level of drought severity. While it is recognized that severity of impacts may be widely variant among the water user groups, the District has established severity action levels which are related both to the general impacts of the drought and to deficit moisture balance accounting as calculated by the NWS.

b. General Description Levels. The four action levels as described below are used to give District managers a basic framework with which to execute a drought response.

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ACTION LEVELS

Level I. This level is designed as an alert phase in which the Water Managers monitor the onset of an apparent drought situation. The plan requires normal operational procedures and coordination for monitoring of storages, users, releases, etc., required to perform normal low flow activities and disseminate status reports within the Corps, other agencies, and users.

Level II. The plan calls for expanding actions ongoing in Level I. In addition, a Corps Drought Management Committee (CDMC) will be activated. As needed, the requests and actions related to water management will be coordinated through the CDMC to assure the various functional elements of the District are responding to the drought in a coordinated and concerted effort. Requests for drought-related actions will be forwarded to the CDMC for its evaluation and recommended actions. The CDMC will coordinate requests and actions with appropriate State and Federal agencies. The Reservoir Control Section coordinates and carries out the plans and deviations through their routine command channels.

Level III. During this phase of the drought, the District engineer will activate the Interagency Drought Management Committee (IDMC) as the interface between the CDMC and the water user's needs in the basin as represented by the committee members. The IDMC will provide user input and coordinate the State and Federal positions on drought actions. This committee will provide the CDMC with justifications, priorities and suggested actions which will serve the most critical needs with the remaining project storage.

Level IV. The level IV actions will exist when the remaining project conservation storage is about 10 percent. Coordination of actions during this level will follow the same procedures as in Level III, but by Level IV conditions have worsened to the extent that inactive storage utilization must be considered. Water rationing and apportionment may be required to maintain critical water needs.

7-02. Drought Management Committees,

a. General. A Corps Drought Management Committee (CDMC) and an Interagency Drought Management Committee (IDMC) will be established for the purpose of coordinating procedures and communicating actions that will be required by the drought management plan. It will be essential that the plan provides for good lines of communication within the Corps as well as the State and Federal agencies, and with the public concerning current and forecasted drought conditions at Corps lakes.

b. Corps Drought Management Committee (CDMC). This committee will coordinate and direct all water management activities of the District during drought situations. The following list provides names of District elements to be used in selecting members for the CDMC.

District Commander

Chief of Engineering Division

Chief of Planning Division

Chief of Real Estate Division

Chief of Operations Division

Chief of Construction Division

Office of Counsel

Emergency Management

Safety Office

Public Affairs Office

Contracting

c. Interagency Drought Management Committee (IDMC). A broader based committee consisting of representatives from various State and Federal agencies should be established for the purpose of providing input into the Corps decision-making process in regard to the use of water in the best interest of water user groups and the general public. The following is a list of both Federal and State agencies that may be used in developing membership of IDMC.

Federal:

Corps of Engineers

Southwestern Power Administration (SWPA), (*i.e., Power Marketing Agency*)

Fish & Wildlife

Environmental Protection Agency

National Weather Service

U.S. Geological Survey

Bureau of Reclamation

Compact Commissions

Soil Conservation Service

State:

Fish & Wildlife

Water Resources Division

River Authorities

Department of Agriculture

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State Health Department

Representative of Governor's Office

Emergency Services

Parks and Tourism

Water Rights Commission

Irrigation Districts

Water Supply Association

7-03. Drought Management Procedures. During drought conditions specific procedures and actions are necessary in order to implement the drought management plan. The following table presents the required actions for each level of drought severity.

ACTIONS:

Level I

Reservoir Accounting of Conservation Storage (Monthly)
Notify State Fisheries for Management Purposes
Low Flow Releases
Monitor Drawdowns
Notification of Usage
Hydropower meeting with SWPA
Monitor Excessive Gate Leakage

Level II

Activate CDMC (Meet Monthly)
Reservoir Accounting of Conservation Storage (Monthly)
Notification of Usage
Forecast Lake Levels
Notify Public through PAO of Safety Hazards
Hydropower Meeting with SWPA (Limit Hydropower Production to Project Yield)
Consolidate Special Event Releases
Notify Users of Intake Invert Releases
Verify Flow Rating Tables
Potential Use of Flood Storage
Reduce Gate Leakage

Level III

CDMC meet weekly
IDMC (Activate) Meet Monthly
Reservoir Accounting of Conservation Storage (Weekly)
Notification of Usage (Letter)
Forecast Lake Levels
Notify EOC
Minimize Special Event Releases
Report Usage Weekly
Define Additional Surplus Water

Level IV

CDMC Meet Weekly
IDMC Meet Weekly
Reservoir Accounting of Conservation Storage (Weekly or Less)
Notification of Usage (Letter)
Forecast Lake Levels
No Special Event Releases

VIII. INTERAGENCY COORDINATION AND PROCEDURES

8-01. Interagency Coordination. Describe and prepare flow charts, if required, outlining major coordination activities with other Federal or State agencies that would be required to implement the drought contingency plan.

8-02. Technical Procedures. Describe procedures and approval authority for water supply contracting, i.e., procedures and approval authority for requests for withdrawals of small amounts (50 acre-feet or less) of water over short periods of time.

IX. PUBLIC INFORMATION

9-01. Describe ways in which information will be disseminated to the general public including statements prepared in accordance with ER 1110-2-240, ER 1110-2-1941, and EM 1110-2-3600.

X. RESPONSIBILITY

10-01. The _____ District Reservoir Control Section is responsible for the preparation, revision, and implementation of the subject Drought Contingency Plan. The Reservoir Control Center of the _____ Division will have the responsibility for review and approval.